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10/630,962	07/30/2003	Fabio Perini	71071	1772

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EXAMINER
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KINNEY, ANNA L

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/630,962	Applicant(s) PERINI, FABIO	
	Examiner Anna Kinney	Art Unit 1731	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9, 11-20 and 28-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17 and 31 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-16, 18-20, 28-30 and 32-35 is/are rejected.
- 7) ☒ Claim(s) 15, 31 and 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

The claims were previously restricted as follows:

- I. Claims 1 through 20, drawn to a device to pulp waste paper material, classified in class 162, subclass 4.
- II. Claims 21 through 27, drawn to a method for recovering and recycling waste paper material, classified in class 162, subclass 191.

Applicant elected Group I, drawn to claims 1 through 20.

The requirement is still deemed proper and is therefore made FINAL.

### ***Response to Arguments***

The Examiner acknowledges that the applicant has revised the specification and claims to overcome objections and 35 USC 112 rejections. However, the Examiner notes that the abstract remains unchanged.

Applicant's arguments filed September 12, 2005 have been fully considered but they are not persuasive.

In response to applicant's argument that claim 10 is not obvious (Remarks, p. 12), the Examiner notes that claim 10 has been cancelled. In response to the chopper pump limitation that is now contained in claim 1 (Remarks, p. 11), the Examiner has revised the rejection and added a prior art reference.

In response to applicant's argument that Plaskon does not disclose one portion of the flow is removed and another portion recirculated, claim 11 does not contain a limitation requiring a removed portion. However, with respect to claim 32 (Remarks, p.

13), the Examiner disagrees, and directs the applicant's attention to Plaskon, col. 3, lines 1-6, particularly the last sentence. The Examiner construes this paragraph to be a discussion of an alternative embodiment in which the dump line (i.e., portion removed) is included as part of the recirculation apparatus (the outlet stream). Note that this paragraph immediately follows a description separately discussing the dump line.

In response to applicant's argument that Plaskon's items 30 and 70 do not have a pumping function, the Examiner disagrees. The symbol identified as items 30 and 70 is well known in industrial use as representing a pump (e.g., [http://www.uyseg.org/colour/activity/act\\_07/07symbol.htm](http://www.uyseg.org/colour/activity/act_07/07symbol.htm), page 1 of 3). Pumps inherently have a pumping function. The impeller provides the pulp to the outlet line (col. 2, lines 48-51), at which point the Examiner interprets that the pump provides the movement through the recirculation line.

In response to applicant's argument that there is no incentive to combine Danforth and Plaskon, the Examiner has provided a motivation in the rejection.

In response to applicant's argument that Plaskon disclose a batch process and Danforth discloses a continuous process, the Examiner disagrees. Plaskon expressly discloses that broke is typically repulped in either a batch or a continuous process (col. 1, lines 37-41). Plaskon does not limit the pulper to a batch process.

In response to applicant's argument that the pulper of Danforth has insufficient space to accommodate arranging the pump intake and the recirculation duct outlet one in front of the other (Remarks, p. 15), the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the

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primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

### ***Specification***

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract of the disclosure is objected to because the legal phraseology "said" is used in lines 2 and 4 of the abstract. Correction is required. See MPEP § 608.01(b).

### ***Claim Objections***

Claims 31 and 32 are objected to because of the following informalities: the Examiner suggests that the applicant move the word "and" to the end of the second-to-last limitation in each claim. Also, in claim 32, lines 5, the Examiner suggests that the word "pare" should be "paper". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 16 recites the limitation "said two inclined surfaces" in lines 2-3 of the claim. There is insufficient antecedent basis for this limitation in the claim. Claim 16 is now dependent from claim 31, which contains no limitations regarding inclined surfaces.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth (U.S. Patent 3,201,066) in view of Vaughan (U.S. Patent 3,973,866).

With respect to claim 1, Danforth discloses a pulper device (Figure 2, item 47) for waste paper material, characterized in that it comprises: a container (Figure 3, item 60) for collecting said waste, having an inlet opening (Figure 3, item 57) for said waste; at least one pressurized water nozzle (Figure 4, item 98) which produces a jet of water which intercepts the waste which falls into said container, and a first pump (Figure 3,

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item 116) which removes the water and the waste from said container. Danforth does not disclose expressly that the first pump is a chopper pump.

Vaughan discloses a chopper pump for use with wood pulp (col. 1, lines 6-29).

Danforth and Vaughan are analogous art because they are from the same field of endeavor, that of processing pulp.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a chopper pump as described by Vaughan in the pulper of Danforth to obtain the invention as specified in claim 1. The motivation would have been to pump thick slurry without the pump clogging or losing its prime and without the slurry being dewatered (col. 1, lines 47-50).

With respect to claim 8, Danforth discloses that said container has an elongated longitudinal extension, the inlet opening extending in the longitudinal direction of extension of said container (Figure 5 and col. 3, lines 8 to 11).

With respect to claim 28, Vaughan discloses that said chopper pump both pulverizes the waste paper material in the water, and pumps the water and waste paper material simultaneously (col. 1, lines 6-11).

Claims 1, 2, 4/2, 5/4/2, 6/4/2, 7/4/2, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doelle et al (U.S. Patent 6,358,367) in view of Vaughan.

With respect to claim 1, Doelle et al discloses a pulper device (Figure 3, item 76) for waste paper material, characterized in that it comprises: a container (Figure 3, item 76) for collecting said waste, having an inlet opening (Figure 3, item 66) for said waste; at least one pressurized water nozzle (Figure 3, item 74) which produces a jet of water

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which intercepts the waste which falls into said container, and a first pump (Figure 2, item 32) which removes the water and the waste from said container. Doelle et al does not disclose expressly that the first pump is a chopper pump.

Vaughan discloses a chopper pump for use with wood pulp (col. 1, lines 6-29).

Doelle et al and Vaughan are analogous art because they are from the same field of endeavor, that of processing pulp.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use a chopper pump as described by Vaughan in the pulper of Doelle et al to obtain the invention as specified in claim 1. The motivation would have been to pump thick slurry without the pump clogging or losing its prime and without the slurry being dewatered (col. 1, lines 47-50).

With respect to claim 2, Doelle et al discloses that it comprises a first series (Figure 3, item 74) of pressurized water nozzles and a second series (col. 4, lines 20 to 23) of pressurized water nozzles, the jets produced by the nozzles of the first series and the nozzle jets produced by the second series having trajectories which intersect in a zone where said waste falls (Figure 3).

With respect to claim 4/2, Doelle et al discloses that two inclined surfaces (Figure 3) for guiding the jets produced by the nozzles are associated with said first series (Figure 3, item 74) and said second series (Figure 3, item 74) of nozzles.

With respect to claim 5/4/2, Doelle et al discloses that said inclined surfaces are oriented approximately parallel to the trajectory of the jets produced by the respective nozzles (Figure 3).



With respect to claim 6/4/2, Doelle et al discloses that each of said surfaces extends from the respective series of nozzles as far as a respective terminal edge (Figure 3), the terminal edges of said two surfaces delimiting a passage for conveying the water and the waste paper material.

With respect to claim 7/4/2, Doelle et al discloses that said surfaces are flat (Figure 3).

With respect to claim 9, Doelle et al discloses that said container has an elongated upper opening (Figure 3), parallel to which said first and said second series of nozzles (Figure 3, items 74) extend.

Claims 3, 4/3, 5/4/3, 5/4/3, and 7/4/3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doelle and Vaughan as applied to claims 1 and 2 above, and further in view of Chupka et al (U.S. Patent 5,582,686).

With respect to claim 3, Doelle et al and Vaughan do not disclose expressly that said nozzles have trajectories with different inclinations.

Chupka et al discloses that nozzles have trajectories with different inclinations (col. 3, lines 37 to 45).

With respect to claim 4/3, Doelle et al discloses that two inclined surfaces (Figure 3) for guiding the jets produced by the nozzles are associated with said first series (Figure 3, item 74) and said second series (Figure 3, item 74) of nozzles.

Chupka et al also discloses that two inclined surfaces (Figure 3, item 18) for guiding the jets produced by the nozzles (Figure 3, items 17 and 55) are associated with

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said first series (Figure 3, items 33a and 34 a) and said second series (Figure 3, items 33 and 34) of nozzles.

With respect to claim 5/4/3, Doelle et al discloses that said inclined surfaces are oriented approximately parallel to the trajectory of the jets produced by the respective nozzles (Figure 3).

Chupka et al also discloses that said inclined surfaces are oriented approximately parallel to the trajectory of the jets produced by the respective nozzles (Figure 3).

With respect to claim 6/4/3, Doelle et al discloses that each of said surfaces extends from the respective series of nozzles as far as a respective terminal edge (Figure 3), the terminal edges of said two surfaces delimiting a passage for conveying the water and the waste paper material.

With respect to claim 7/4/3, Doelle et al discloses that said surfaces are flat (Figure 3).

Doelle, Vaughan, and Chupka are analogous art because they are from the same field of endeavor, that of processing pulp.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to apply the different jet trajectories of Chupka to the pulping system of Doelle to obtain the invention as specified in claims 3, 4/3, 5/4/3, 6/4/3, and 7/4/3. The motivation for doing so would have been to allow the jets relatively reciprocating movement (col. 3, lines 3 to 6).

Claims 11, 12, 13, 14, 29, 32, 33, 34, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth and Vaughan, as applied in the rejection of claim 1 and 28, above, in view of Plaskon et al (U.S. Patent 6,086,714).

With respect to claim 11, Danforth and Vaughan do not disclose expressly that the pulper comprises a recirculation duct between said first pump and the container, by means of which a part of the flow sucked in by said first pump is recirculated inside said container. However, Danforth does disclose a bypass line between the container outlet and the first pump.

Plaskon et al discloses that it comprises a recirculation duct (Figure 1, item 16) between said first pump (Figure 1, item 30) and the container (Figure 1, item 10), by means of which a part of the flow sucked in by said first pump is recirculated inside said container.

With respect to claim 12, Danforth and Vaughan do not disclose expressly that the outlet of said recirculation duct is situated in a position approximately opposite an intake opening of said first pump.

Plaskon et al discloses that the outlet of said recirculation duct (Figure 2, item 54) is situated in a position approximately opposite an intake opening (Figure 2, item 56) of said first pump.

With respect to claim 13, Danforth and Vaughan do not disclose expressly that the outlet of said recirculation duct and the intake opening of said first pump are arranged approximately at the ends of the elongated longitudinal extension of said

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container. However, Danforth does disclose the elongated longitudinal nature of the container (see the 102(b) rejection, above).

Plaskon et al discloses that the outlet of said recirculation duct (Figure 2, item 54) and the intake opening of said first pump (Figure 2, item 56) are arranged approximately at the ends of the container (Figure 2, item 50).

With respect to claim 14, Danforth discloses that the bottom of said container is inclined downwardly toward the intake opening of said first pump (col. 3, lines 22 to 24). Danforth and Vaughan do not disclose expressly the relative location of a recirculation duct.

Plaskon et al discloses two recirculation lines. One recirculation line discharges to the vessel through the opposite wall from the pump intake. The other recirculation line discharges to the top of the vessel. The Examiner interprets this to mean that the recirculation flow may either follow the downward incline of the floor as described by Danforth, or the flow may flow downward toward the pump intake by gravity.

With respect to claim 29, Danforth and Vaughan do not disclose expressly a recirculation duct connected to said chopper pump and said container, recirculating another portion of the waste material and water back into said container through said recirculation duct.

Plaskon et al is applied as in the rejection to claim 11, above.

With respect to claim 32, Danforth and Vaughan are applied as in the rejection to claim 1, above, and Plaskon et al is applied as in the rejection to claim 11, above.

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With respect to claim 33, Danforth and Vaughan do not disclose expressly that the recirculation duct is connected to the container diametrically opposite the first pump on longitudinal ends.

Plaskon et al discloses that said first pump is arranged at a first longitudinal end of said container (Figure 2, item 56); said recirculation duct is connected to a second longitudinal end of said container (Figure 2, item 54) said first and second longitudinal ends being arranged diametrically opposite on said container to flow the waste to said first longitudinal end (Fig. 2; col. 3, lines 1-7).

With respect to claim 34, Danforth and Vaughan are applied as in the rejection of claim 1, above.

With respect to claim 35, Vaughan is applied as in the rejection to claim 28. Danforth, Vaughan, and Plaskon et al are analogous art because they are from the same field of endeavor, that of processing pulp.

At the time of the invention, it would have been obvious to one of ordinary skill in the art to add a recirculation duct, with an inlet and an outlet at specific locations, to the broke pulper of Danforth and Vaughan, to obtain the invention as specified in claims 11 through 14, 29, and 32-35.

The motivation for doing so would have been that a typical broke pulping system recirculates a portion of the pulp slurry back into the vessel (col. 1, lines 46 and 59 to 60).

Claims 18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth and Vaughan in view of Heiskanen et al (E.P. Patent Application 1 010 804 A1).

With respect to claim 18, Danforth and Vaughan do not disclose expressly a thickening station to which at least partly the mixture of water and waste paper material sucked by said first pump is conveyed and inside which the solid content of the mixture is increased, eliminating therefrom a part of the water content.

Heiskanen et al discloses a thickening station (Figure 3, item 36) to which at least partly the mixture of water and waste paper material is conveyed (Figure 3, item 33) and inside which the solid content of the mixture is increased, eliminating therefrom a part of the water content (Figure 3, item 48).

With respect to claim 20, Danforth and Vaughan do not disclose that the mixture leaving said thickening station is conveyed to another container for subsequent conveying to a headbox associated with the paper production line and the water separated from said mixture is recycled.

Heiskanen et al discloses that the mixture leaving said thickening station (Figure 3, item 36) is conveyed to another container (Figure 3, item 38) for subsequent conveying to a headbox associated with the paper production line and that the water separated from said mixture (Figure 3, item 48) is recycled (Figure 3; and Figure 2, item 44).

Danforth, Vaughan, and Heiskanen et al are analogous art because they are from the same field of endeavor, that of processing pulp.

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At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add a thickening station, a second pump, and a storage container for the pulp prior to use in the headbox, as described by Heiskanen et al, to the broke pulper of Danforth and Vaughan, to obtain the invention as specified in claims 18 and 20. The motivation for doing so would have been that low broke consistency requires huge buffer tanks which increase the time needed for changes of grade and complicate the regulation of the process, as well as add space requirements, big investments, and slow water circulations (col. 1, line 36 to col. 2, line 2); that the second pump is typical of a prior art broke system, which requires an intermediate tank (col. 2, lines 19 to 22 and 29 to 33); and because breaks in the production process and sometimes long discontinuous process stages must be prepared for beforehand (col. 1, lines 37 to 42).

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth, Vaughan, and Heiskanen et al, as applied to claim 18 above, and further in view of Plaskon et al.

With respect to claim 19, Danforth and Vaughan do not disclose expressly a recirculation duct connected to the first pump and the container removes a portion, and recirculates another portion, of waste material and water, or that a second pump, which conveys the first portion of the flow sucked by said first pump, toward said thickening station, is arranged along the delivery duct of said first pump.

Plaskon et al discloses a recirculation duct (Fig. 2, item 54) connected to a first pump (Fig. 2, item 70) and a container (Fig. 2, item 50), said first pump removing a first portion of the waste material and water from said container, and recirculating another

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portion of the waste material and water back into said container through said recirculation duct (col. 3, lines 1-7).

Heiskanen et al discloses that a second pump (Figure 1, item 22), which conveys waste material and water removed from the container (Fig. 1, item 10) and sucked by said first pump (Figure 1, item 20), toward said thickening station (Figure 1, item 16), is arranged along the delivery duct of said first pump (Figure 1, item 20).

Danforth, Vaughan, Plaskon, and Heiskanen et al are analogous art because they are from the same field of endeavor, that of processing pulp.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to add a recirculation duct as described by Plaskon et al to the broke pulper of Danforth, Vaughan, and Heiskanen et al, to obtain the invention as specified in claim 19. The motivation for doing so would have been that a typical broke pulping system recirculates a portion of the pulp slurry back into the vessel (col. 1, lines 46 and 59 to 60).

Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Danforth, Vaughan, and Plaskon, as applied to claim 29 above, and further in view of Doelle.

With respect to claim 30, Doelle is applied as in the rejection of claim 2, above. Doelle further discloses that the jets exert a pulping action on the waste (col. 4, lines 18-25).



***Allowable Subject Matter***

Claims 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 16 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

Claims 17 and 31 are allowed.

The following is an examiner's statement of reasons for allowance: the primary reason is the inclusion of the limitation requiring a suction duct connected to the pulper.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anna Kinney whose telephone number is (571) 272-8388. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ALK

  
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